



*New Frontiers
Preproposal
Conference*

New Frontiers Preproposal Conference

Welcome and New Frontiers Program Overview

**Orlando Figueroa
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NASA's New Frontiers Program

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- "A balanced set of small, medium, and flagship missions is required in order to meet the wide variety of scientific and technical challenges" - *2003 Solar System Exploration Roadmap*
- Created in the tradition of the Discovery Program, NF will fill the need for medium (\$700M) class missions
- NF is the vehicle whereby the **Science** of highly-ranked medium class missions from the NRC Decadal Survey – *"New Frontiers in the Solar System: An Integrated Exploration Strategy"*
 - **South Pole Aitken Basin Sample Return (SPA-SR)**
 - **Jupiter Polar Orbiter with Probes (JPOP)**
 - **Venus In-situ Explorer (VISE)**
 - **Comet Surface Sample Return (CSSR)**
 - **Kuiper Belt Pluto Explorer (KBPE)**
- New Horizons mission to Pluto/Charon has been designated as the first New Frontiers mission (NF 1)
- NASA/OSS plans to release a NF AO approximately every 3 years



New Frontiers Program Details

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- Each NF mission will have a Principal Investigator (PI) who is responsible for all aspects of the mission and is accountable to NASA
- Each NF mission must have a fully qualified and experienced Project Manager (PM) (Sec 5.4.2 NF AO), *and team* to execute the mission
- The selection will be a two step selection process—up to 3 investigations could be chosen for Phase A: but only one will continue into Phase B
- We expect to make the initial selections (for phase A) by July 2004
- Investigations must show unencumbered reserve at confirmation (end of Phase B) of at least 25 % of all costs through launch (excl. ELV and RPS) (Sec 7.3.3 NF AO)
- There is a Baseline Mission and a Performance Floor. Selection is based on both
- Several factors considered in selection: Science merit, technical merit and feasibility, feasibility of proposed approach form implementation
 - Past performance in the implementation of previous or current cost capped missions will be one of the factors used to assess technical and programmatic risk (Sec 7.3.3 NF AO)



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- NF missions:
 - Have a significant cost cap--\$700M(FY03)
 - Include provision for Radioisotope Power Sources (RPSs)
 - Allow for a development schedule (48 mo. B/C/D) commensurate with a larger scope mission
- The role of the PI, the PM, and their project team will be crucial if a selected team is to go on to achieve mission success within schedule and within budget
- We will use the Explorer Program Office Model as a guide for providing Program Management and Project Oversight and Assessment to NF missions
- A Discovery and New Frontiers Program Office, responsible to HQ, is being established at JPL
- **Frequent access to space (one new mission every three years) requires community discipline and responsible project management in order to control costs while ensuring mission success**